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Session C3- A culvert too far: The failed attempt to update state culvert rules in Maine

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MaineDOT

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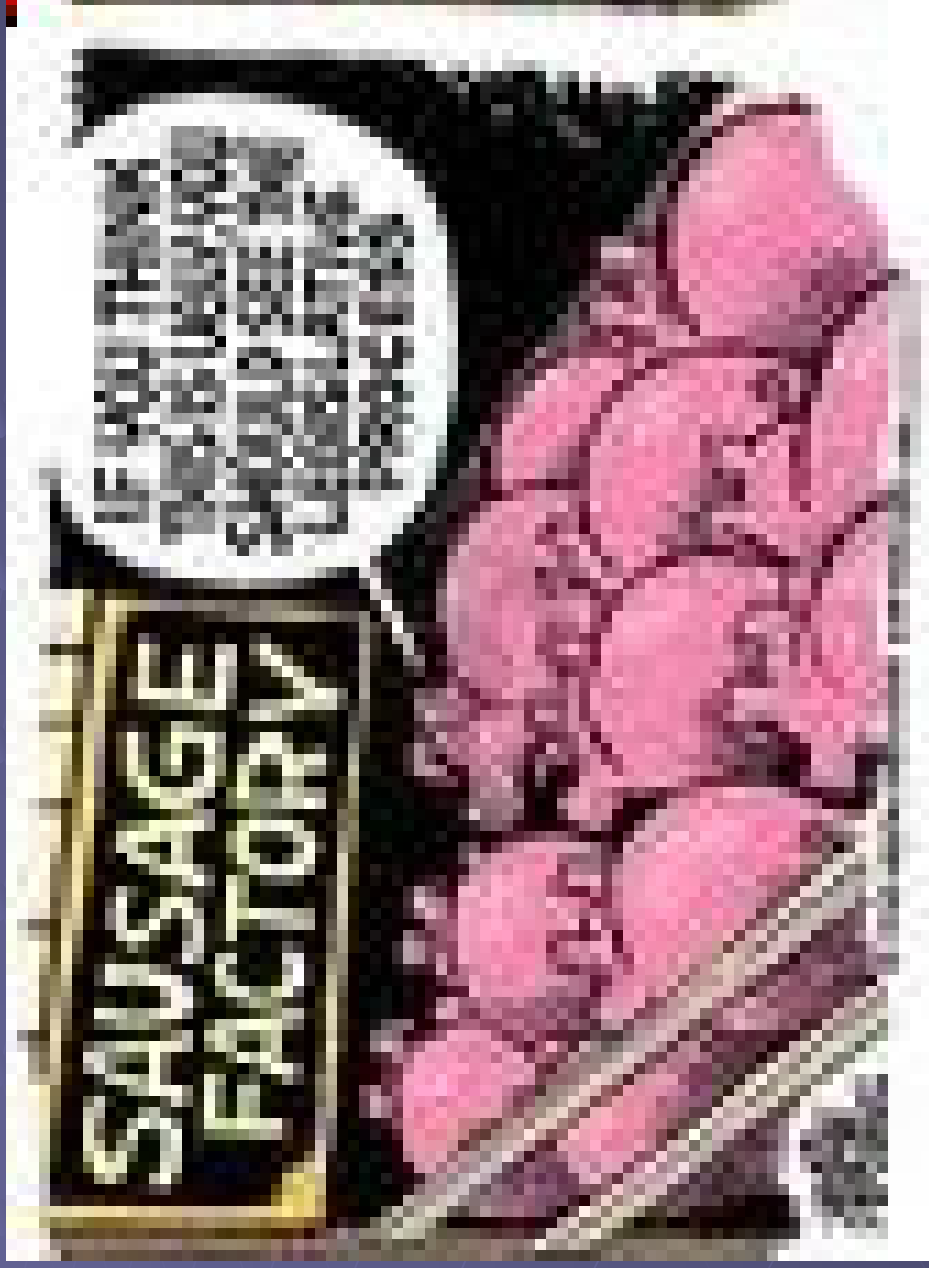
A Culvert Too Far: The Failed Attempt to Update State Culvert Rules in Maine

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2011 Ecohydrology Conference
University of Massachusetts / Amherst
27-29 June 2011

or Welcome to the Sausage Factory





08/10/2007 03:26 pm

Culvert Regulation for Fish Passage in Maine

- **Federal**
 - Clean Water Act
 - Endangered Species Act
 - Regulated by ACOE under General Permit
 - Input from USFWS & NOAA
- **State**
 - **Natural Resources Protection Act (NRPA)**
 - Regulated by DEP
 - Input from DIFW & DMR

Federal Regulation

- Triggered by “Federal Nexus”
 - Federal funds involved
 - ACOE permit required
 - Clean Water Act
 - Endangered Species Act
 - Salmon – potentially much of state
- Projects reviewed by Service agencies
 - USFWS
 - NOAA-NMFS

Federal Oversight Missing

- No Nexus
 - No Federal \$\$\$
 - DOT projects with state \$\$\$ only
 - Local projects – local \$\$\$
 - ACOE permit not needed
- Not to worry – state regulations fill the gap
 - Well ... maybe ...

Maine NRPA Standard

- 3. Harm to habitats; fisheries. The activity will not unreasonably harm any significant wildlife habitat, ..., freshwater, estuarine or marine fisheries or other aquatic life.
- *Whew ... the fish are covered ...*

§480-Q. Activities for which a permit is not required

- 2. Maintenance and repair ...
- 2-A. *Existing road culverts*. In any protected natural resource area, a permit is not required for the repair and *maintenance* of an existing road culvert or for the *replacement* of an existing culvert, as long as the replacement culvert is: ...
- The dreaded “*maintenance exemption*”

Road Culverts

- In transportation, there are very few truly “new” culverts
 - i.e. at new locations
- Almost all culvert activity is
 - Maintenance & Repair
 - Replacement
 - Slip & invert liners have been interpreted as maintenance

Result

- No Federal nexus
 - much road culvert activity would come under the “maintenance exemption” in state law
- *A significant breach in the regulatory framework for protecting fisheries*
- Frustration on part of state resource agencies
 - No regulatory or enforcement authority
 - DEP reluctant to enforce against towns

Fast Forward to 2009

- Climate change – all the rage
- LD 1333:
 - “The Climate Change and Energy Planning Act of 2009”
 - From great beginnings, ended up as a culvert bill
 - Maine Audubon a major driver

From Climate Change to Culverts

- Maine Audubon: habitat focus
- Climate warms
 - Cold water habitat retreats
- Effective retreat requires connectivity
- Potential bar to connectivity: culverts
 - No passage – fish can't move upstream to colder water
- So culverts are a climate change issue

New NRPA Language

- 2-A ... A person repairing, replacing or maintaining an existing culvert under this subsection shall *ensure that* ... the crossing does *not block passage for fish* in the water course or passage for *other aquatic organisms* in the water course ... Replacement culverts and techniques used in installing the *culverts must achieve natural stream flow*.

As if That Were Not Enough ...

- ... *require municipalities* to achieve natural stream flow when they are repairing or maintaining roads or stream crossings.
- NO EXEMPTIONS!

The End of the World as We Know It

- Passage: from Fish to Aquatic Organisms
- Natural Streamflow !?#@
- Aimed at Municipalities
- No Exemptions

But this was just the beginning

- This was the law
- Now DEP had to make rules to implement law

The Rules – Round 1

- Round up the usual stakeholders
 - NGO's, State Agencies, Towns
- Define some terms
 - “*natural streamflow*” – assumed for culverts at least 1.2 x BF wide
 - Require culverts to be 1.2BF for simplest treatment
 - Otherwise, “full permit” required
 - Aquatic organisms – whatever is there

Feared Results

- Bigger culverts – duh!
 - That's the point!
- More costly
 - Yes
 - NGO response: do fewer, better projects
- Can you guess the outcome?

Reactions

From The Maine Municipal Association ...

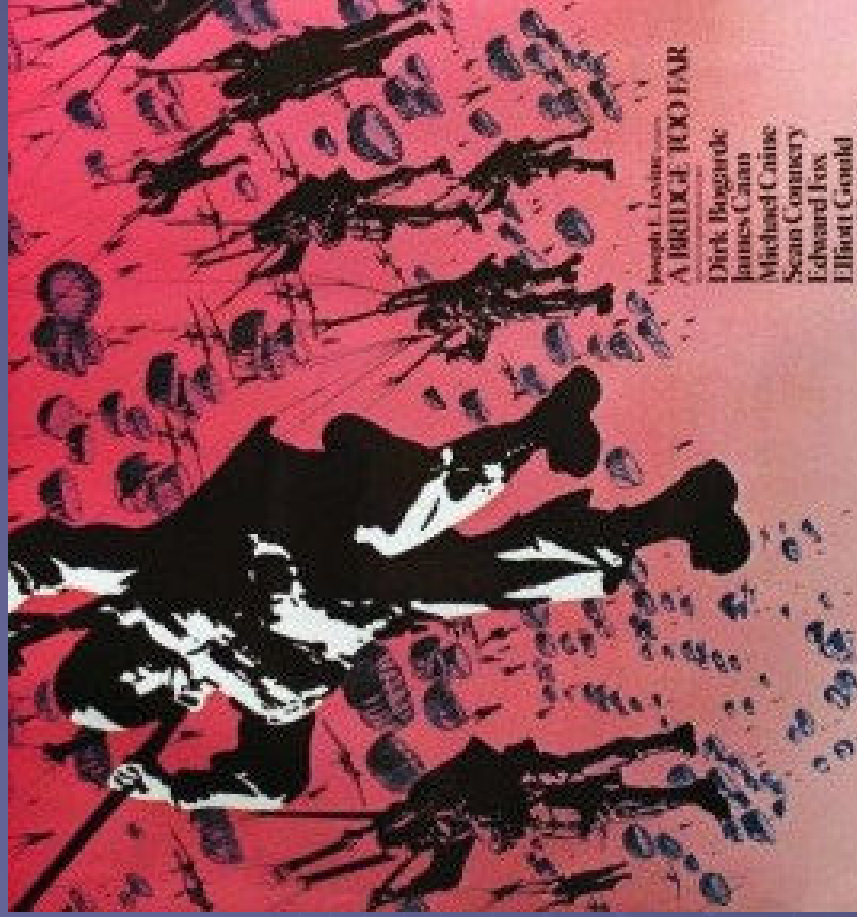
**“The Culvert Rules:
Property Taxpayer v. Aquatic Organisms”**

Maine Towns

- Several hundred separate towns
- Most very small
- No Money
- No Staff
- No Expertise
- “NO” to new culvert rules

Round 1 Decision

- Knock Out
- Corpse carried out of the ring
- Maine DEP regroups for Round 2
- Bring in MaineDOT (*trumpets sound*)



OUT OF THE SKY
COMES THE SCREEN'S
MOST INCREDIBLE
SPECTACLE OF
MEN AND WAR!

Joseph E. Levine

A BRIDGE TOO FAR

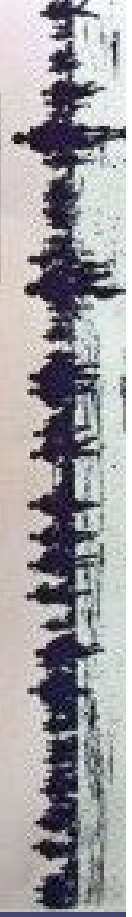
Joseph E. Levine
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Rulemaking – Round 2

- MaineDOT brought in to help DEP
- MaineDOT effectively acts as technical advisor to development of new rules
- Goals:
 - Address goal of improved FP
 - Develop palatable language
 - Use a familiar engineering framework
 - Get away from “natural streamflow” & “bankfull”
 - Develop simple “BMP” approach
 - Smaller culverts - maybe

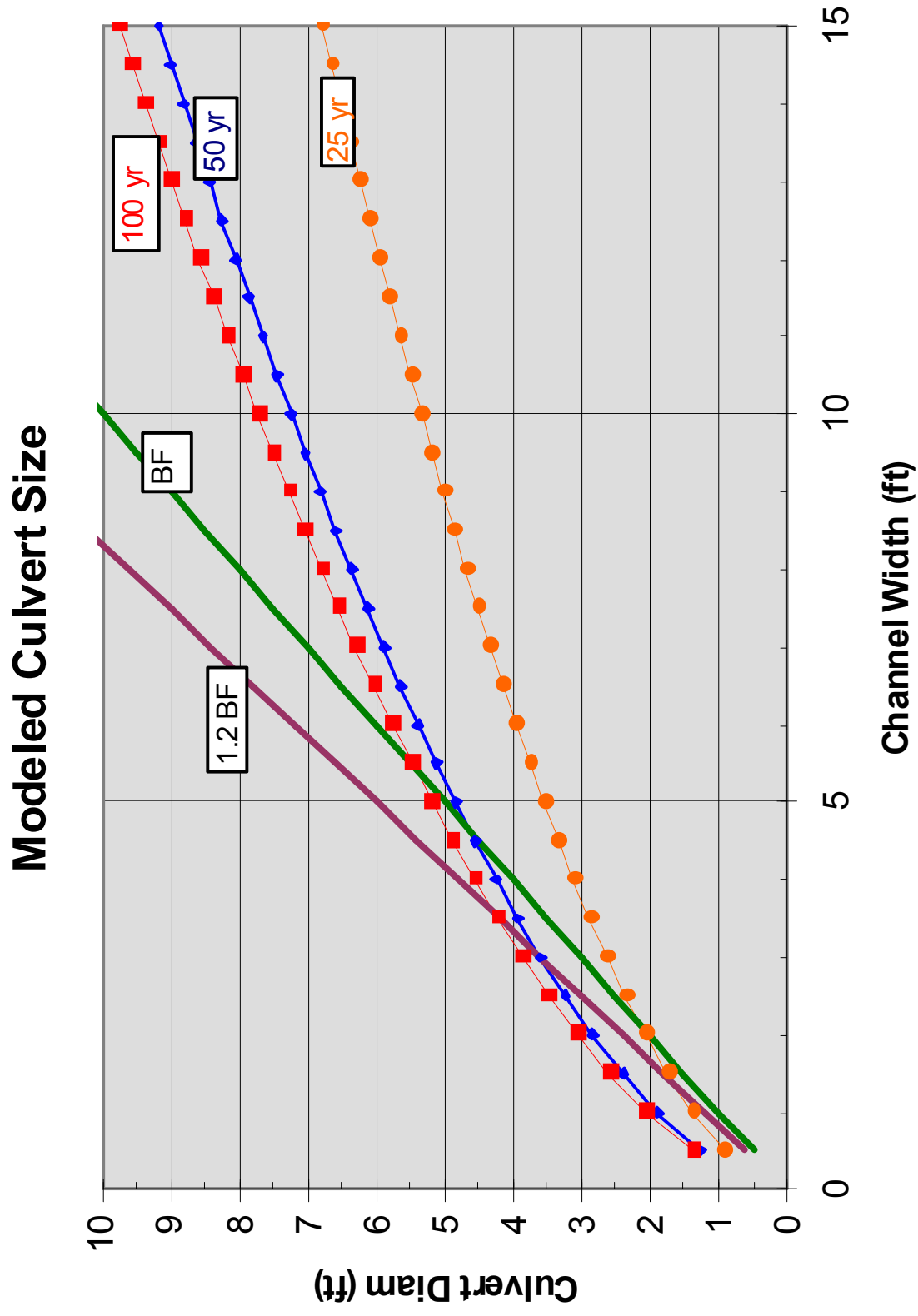
Proposal

- Use familiar “Return Period” design language
- Develop a simple “cook book” design procedure
 - Something a Town road crew might do

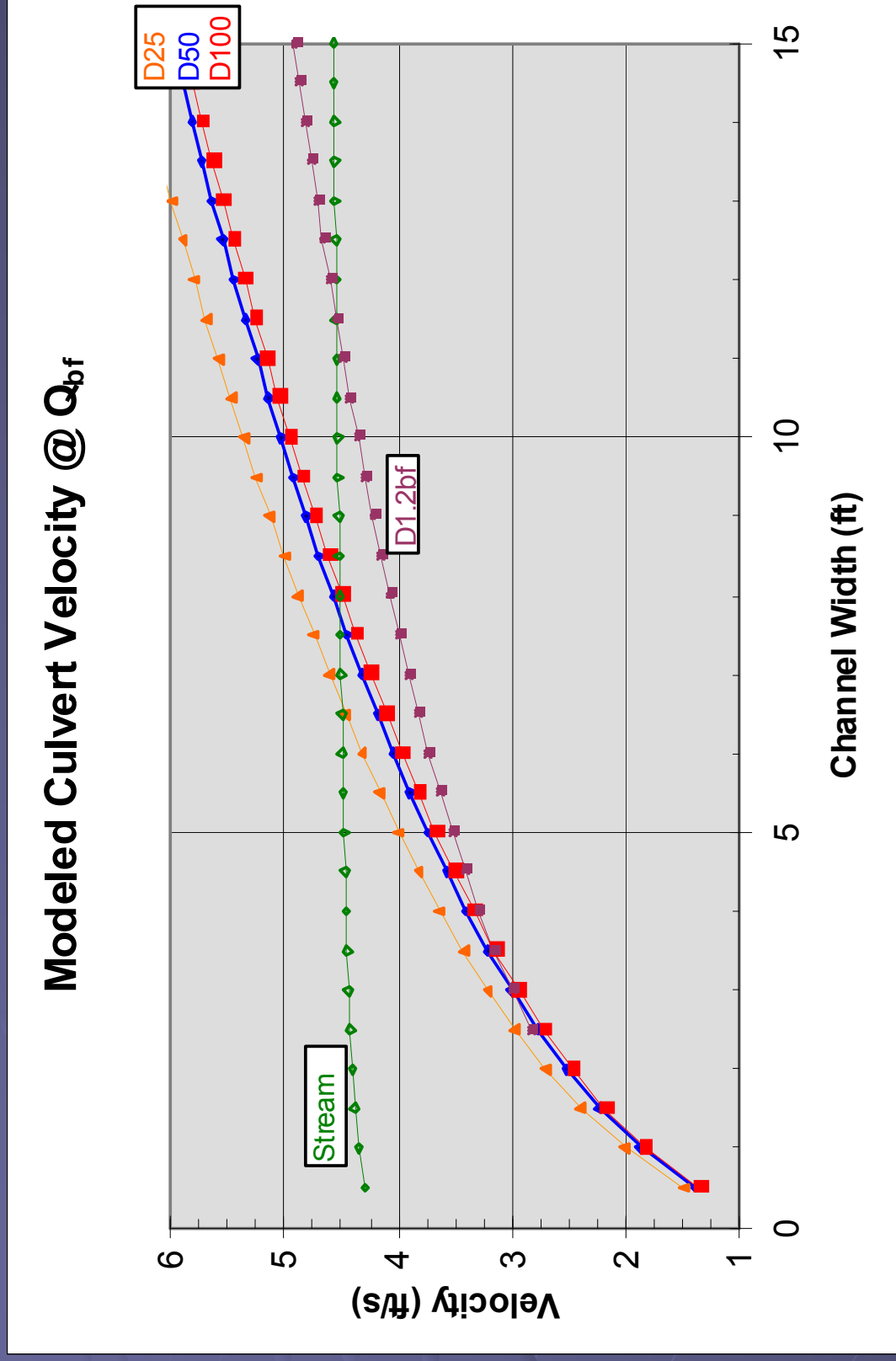
Design Objectives

- Pass Q_{100} at just-full flow
- Simple Hydrology
 - Regressions for hydraulic geometry, peak flows
- Simple Hydraulics
 - Embed 25%, nearly flat
- Achieve a simple “Best Practice”
 - For hydraulic capacity
 - For fish passage
 - Easy to apply
 - Simple but logical basis
 - Smaller, more affordable - maybe

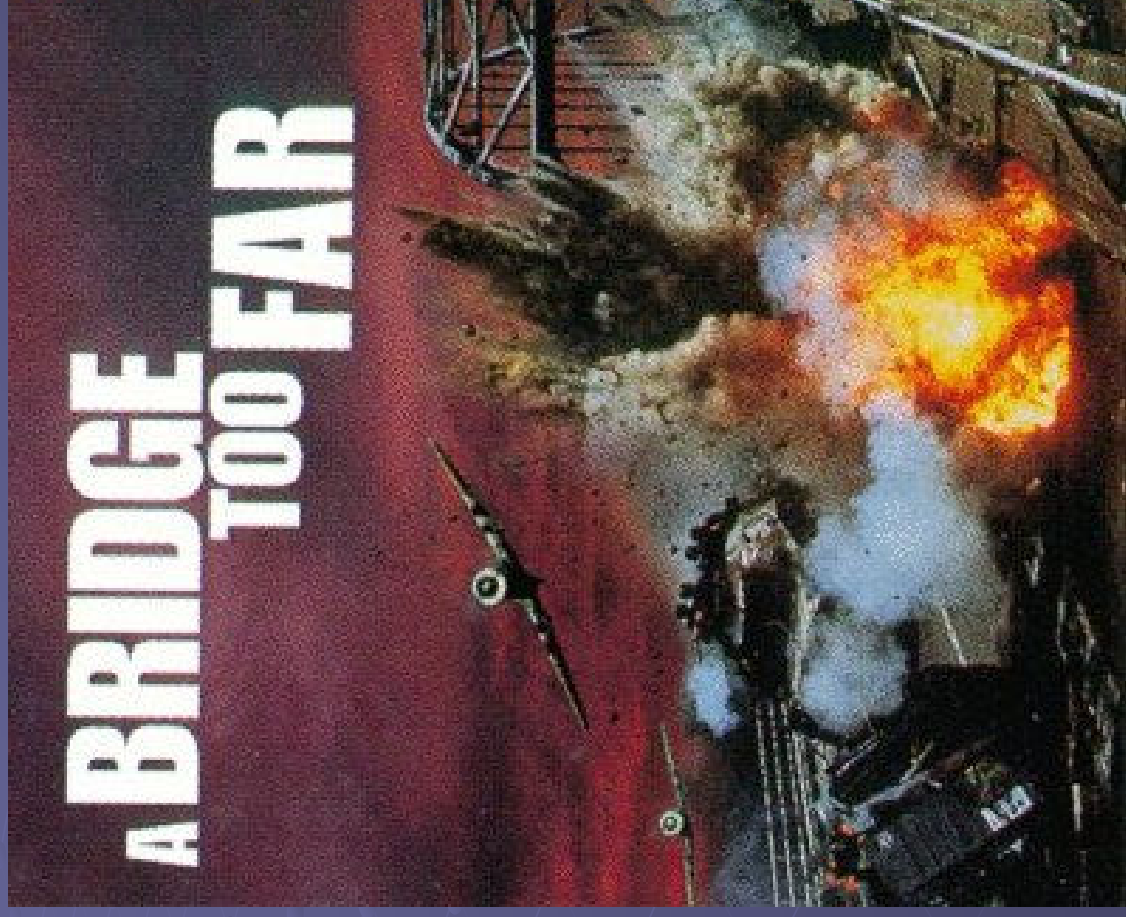
Final Sizing Rule



Estimated Velocities by Rule



But We Know How It Ended ...



Final Decision – Dec 2010

- Political Backdrop
 - Nov 2010 election
 - Governor's Office & Both Houses of Legislature switch from D to R
 - General political sentiment
 - Against regulation
 - Against “unfunded mandates from Augusta”
 - For reduced spending
 - Democrats (at least temporarily) tired & defeated
 - They were biggest supporters

Final Stakeholders Meeting

● Three Segments

- State agencies
- Towns
- NGO's

● The lineup

- Agencies: more or less supportive
- NGO's: against
- Towns: nervous, not thrilled

The End - COLLAPSE

- In the background ...
 - MaineDOT: create a statewide “Aquatic Restoration Plan” (ARP)
- NGO’s: put off decision, pursue ARP
 - Wait for a more favorable political climate
 - Long, strategic view
- Towns: saw breathing room, supported NGO’s
 - Short-term tactical view
- Resource Agencies: moved over behind ARP
 - Somewhat relieved, maybe hoping for “better” rule
- **DEP: blindsided!**
 - **2 years of work down the drain**

What Next?

- ARP process just starting up
 - Report by 12/31/2012
 - Parallel culvert “technical working group”
- Everybody waiting, thinking *they* will be in a stronger position 2 years from now
 - But somebody will come out disappointed

Coda

- Rules collapsed but 2009 Revised NRPA remained in place
 - “no exemption” continues
 - Towns, DEP, DOT unhappy
 - DEP:
 - No resources for enforcement
 - Dislikes enforcement anyway
- So Bring on LD 1387

LD 1387

“An Act to *Restore Exemptions* in the Natural Resources Protection Act”

- “A permit is not required for the repair and maintenance of an existing road crossing”
...
- Replacements: Exemption requires
 - Slope $\leq 2\%$
 - Embed 25% D
 - ***Still no size requirement***
- Slip liners, invert liners not exempt

Bigger Questions

- Whatever the rules and laws ...
 - Will towns actually follow the rules & get the permits?
 - Problem for both State & Fed regs
 - Will State DEP and Fed ACOE get serious about enforcement?
 - Will State ever provide meaningful support to towns?
 - Design, process
 - funding